



NIOSH Interim Guidance on Health and Safety Hazards When Working with Displaced Domestic Animals

The National Institute for Occupational Safety and Health (NIOSH) provides the following interim guidelines for preventing injury and illness among workers performing animal rescue and recovery efforts in the response to Hurricanes Katrina and Rita. This guidance is based on best available information as of October 14, 2005 and will be updated as additional information is available.

Only workers who have received proper training in animal restraint, handling, and care should work directly with displaced animals. Employers, response leaders, and volunteer coordinators should ensure that only trained, properly equipped workers are assigned to tasks involving direct animal handling and care.

Background

Evacuations due to natural disasters and other emergencies may result in a large number of displaced domestic animals. Animals may be abandoned in residences, facilities, or outdoors. Many disaster shelters cannot accept pets because of state health and safety regulations. Displaced animals may be without food, water, supervision, and medical care for days or even weeks. Fear, panic, separation anxiety, and other behavioral disorders are common in displaced animals. They may exhibit unpredictable or aggressive behavior.

Displaced domestic animals may present a number of occupational safety and health hazards to emergency response and animal rescue workers. Workers at greatest risk include emergency responders (firefighters, police, and military personnel) and animal rescue workers including animal handlers, animal shelter workers, veterinarians, and veterinary technicians and assistants. However, all workers involved in the evacuation process and early clean-up and remediation efforts are at risk.

Potential Health and Safety Hazards When Working with Displaced Domestic Animals

Animal Bites and Scratches

Animal bites and scratches can result in significant worker injury. Serious bite wounds may require surgical repair. Secondary infections are a significant hazard from bite wounds; they can result in serious joint or systemic infection. Even minor skin damage can result in infections and illnesses. Scratches and injuries from contaminated equipment are also of concern. Bites from dogs, cats, ferrets, and other mammals may present a risk for rabies (see rabies information below). Resources on bite prevention are available at:

<http://www.avma.org/pubhlth/dogbite/>

Rabies and Other Zoonoses

Zoonoses are infectious diseases that are transmitted from animals to humans. Rabies is the primary zoonosis of concern. It is a potentially fatal viral disease. It is contained in saliva and is most often transmitted by the bite of an infected mammal. It is preventable by vaccination. Information on the prevention and control of rabies is available at:

<http://www.cdc.gov/ncidod/dvrd/rabies/>

Domestic animals may transmit other zoonoses to workers. Animal feces, and contaminated skin, fur, surfaces, and cages present a risk of infection. Dogs and especially cats may pose a risk for ringworm which is a skin infection caused by a fungus. Cat feces pose a risk of transmission of toxoplasmosis, a parasitic infection. Some pet rodents (such as hamsters, gerbils, and guinea pigs) can transmit lymphocytic choriomeningitis virus (LCMV). LCMV may be transmitted from exposure to urine, droppings, saliva, or nesting material of infected rodents. Toxoplasma and LCMV may cause birth defects in an unborn child if a pregnant woman becomes infected. Information on the prevention and control of animal-related infectious diseases is available at: <http://www.cdc.gov/ncidod/diseases/pets/index.htm>

October 14, 2005

Page 1 of 5

Title of Document

(continued from previous page)

Sharps-Related Injuries

Workers may be at risk of sharps-related injuries from needles, syringes, broken glass, and scalpels. Information on the prevention of sharps-related injuries is available at: <http://www.cdc.gov/niosh/topics/bbp/#prevent>

Heavy Lifting

Animal rescue and handling involve tasks that require lifting and moving heavy, awkward loads. Workers may lift large animals, and supplies and equipment such as carriers, kennels, cages, food, and bedding material. Heavy lifting may result in sprains, strains, tears, and other lifting injuries. Information on musculoskeletal injuries and their prevention is available at: <http://www.cdc.gov/niosh/topics/ergonomics/>

Dermatologic Conditions

Frequent hand washing, bathing of animals, or exposure to substances on animals' fur may result in a variety of dermatologic rashes, lesions, and other conditions. Information on skin exposure and effects is available at: <http://www.cdc.gov/niosh/topics/skin/>

Animal Allergens

Exposure to animals or animal products can cause asthma and allergies. Animals or animal products such as dander, hair, scales, fur, saliva, and body wastes contain allergens that can cause both respiratory and skin disorders. Information on the prevention of asthma in animal handlers is available at: <http://www.cdc.gov/niosh/animalrt.html>

Latex Allergy

For some workers, exposures to latex and latex products may result in skin rashes; hives; flushing; itching; nasal, eye, or sinus symptoms; asthma; and (rarely) shock. Information on the prevention of latex allergies is available at: <http://www.cdc.gov/niosh/topics/latex/>

Noise

Excessive noise levels that damage hearing may be generated by large numbers of crated, barking animals in enclosed spaces or loud equipment. Information on noise and hearing loss prevention is available at: <http://www.cdc.gov/niosh/topics/noise/>

Pesticide Exposure

Displaced animals may be treated with pesticides to reduce and prevent flea and tick infestations. Health and safety information on pesticides is available at: http://www.epa.gov/pesticides/factsheets/health_fs.htm

Guidance to prevent injuries and illnesses from working with displaced domestic animals

Recommendations for Workers

Workers can reduce their risk of the occupational hazards associated with displaced domestic animals by taking the following steps:

Sanitation and Hygiene

- Wash your hands frequently with soap and water:
 - Before and after handling animals;
 - After coming into contact with animal saliva, urine, feces, or blood;
 - After cleaning cages or equipment;
 - Before eating, drinking, smoking, taking breaks, or leaving work;
 - After removing gloves.
- Use alcohol-based hand sanitizers for cleaning hands when soap and water are not available.

October 14, 2005

Page 2 of 5

Title of Document

(continued from previous page)

- Change into clean clothing before leaving the workplace.
- Wear disposable outerwear or clothing that can be removed before leaving the workplace if clean clothing or laundry facilities are not available.

Personal Protective Clothing and Equipment

- Wear medical examination gloves that provide your skin with a protective barrier when handling animals, animal waste, cages, equipment, and pesticides:
 - Wear two pairs of gloves if one pair alone might tear.
 - Make sure that latex gloves are reduced-protein, powder-free gloves to reduce your exposure to allergy-causing proteins.
 - Use non-latex gloves if you need or want to avoid latex.
 - Wear cotton or leather work gloves as the outer pair when heavy work gloves are needed.
 - Remember that cotton, leather, and other absorbent gloves are not protective when worn alone.
- Wear protective eyewear (safety glasses with side shields) or face shields if there is a risk of spitting or splashing of contaminated material.
- Wear sturdy clothing and protective footwear with non-slip soles; tennis shoes or sneakers do not provide protection from bite, puncture or crushing injuries.
- Wear hearing protection if you must raise your voice to talk to someone an arm's length away (for example, when working in enclosed spaces with barking dogs).

Animal Bites and Scratches

- Complete the rabies preexposure vaccination series before directly handling dogs, cats, ferrets, or other mammals that may be infected with rabies.
- Thoroughly clean all bite wounds and scratches with soap and water.
- Report any bite injury to your supervisor.
- Immediately receive medical evaluation of any bite wound and the need for possible rabies postexposure treatment and vaccination.

Other Hazards

- Take precautions when using scalpels, forceps, and other sharp instruments:
 - Dispose of sharp devices in labeled, puncture-resistant, leak proof sharps disposal containers immediately after use.
 - Do not recap, bend, or remove contaminated needles and sharps.
 - Do not shear or break contaminated needles.
- Take precautions when lifting heavy or awkward loads:
 - Use proper lifting techniques.
 - Reduce the weight of loads when possible.
 - Work together to lift loads that are unsafe for one person to handle.
- Pregnant or immunocompromised workers should avoid contact with cat feces and pet rodents to reduce their risk of zoonotic disease.
- Immediately report to the supervisor:
 - Any needlestick or other sharps-related injury;
 - Any symptom(s) of infectious disease or zoonosis;
 - Any other workplace injury or illness.
- Consult with a healthcare provider about any occupational injury or illness.

October 14, 2005

Page 3 of 5

Title of Document

(continued from previous page)

Recommendations for Employers

Employers should protect their workers from the hazards associated with working with displaced domestic animals by taking the following steps:

- Provide training in:
 - Workplace-specific hazards including bites and scratches, zoonoses, sharps-related injuries, heavy lifting, dermatologic conditions, allergies, excessive noise, and pesticide exposure;
 - Good housekeeping, sanitation, hygiene, and infection control procedures;
 - Animal handling procedures and use of equipment;
 - The use and maintenance of personal protective clothing and equipment.
- Provide hand-washing and sanitation facilities.
 - Provide alcohol-based hand sanitizers for cleaning hands when soap and water are not available.
- Provide appropriate personal protective clothing and equipment:
 - Provide disposable outerwear or clothing if laundry facilities are not available.
 - Provide medical examination gloves that provide workers' skin with barrier protection.
 - Provide non-latex gloves for those workers who need or want to avoid latex.
 - Provide heavy work gloves or restraints for use with aggressive animals.
 - Provide hearing protection for workers where needed.
- Provide preexposure rabies vaccination for workers with direct animal contact; only workers who have completed the preexposure rabies vaccination series should work with dogs, cats, ferrets, or other mammals that may be infected.
- Provide a medical surveillance system that monitors and records all occupational injuries and illnesses.
- Stress to workers the importance of reporting all work-related injuries and illnesses as soon as possible.
- Ensure that any worker with a bite injury is immediately evaluated by a healthcare provider for rabies risk and possible postexposure treatment and vaccination.

Related CDC Resources

Interim Guidelines for Animal Health and Control of Disease Transmission in Pet Shelters After a Hurricane

Provides guidance for the care of animals entering shelters and for persons working with animals in response to hurricanes.

<http://wwwdev.bt.cdc.gov/disasters/hurricanes/katrina/animalhealthguidelines.asp>

Animals in Public Evacuation Centers

Addresses health and safety concerns regarding animals kept in non-Red Cross public evacuation centers.

<http://www.bt.cdc.gov/disasters/animalspubevac.asp>

Hand Hygiene in Emergency Situations

Provides guidance for hand washing and cleaning under emergency conditions.

<http://wwwdev.bt.cdc.gov/disasters/handhygiene.asp>

Protect Yourself from Animal- and Insect-Related Hazards After a Natural Disaster

Provides recommendations for protection from displaced wildlife.

<http://wwwdev.bt.cdc.gov/disasters/animalhazards.asp>

NIOSH Alert: Preventing Needlestick Injuries in Health Care Settings

DHHS (NIOSH) Publication No. 2000-108

<http://www.cdc.gov/niosh/2000-108.html#8>

October 14, 2005

Page 4 of 5

Title of Document

(continued from previous page)

NIOSH Alert: Preventing Asthma in Animal Handlers
DHHS (NIOSH) Publication No. 97-116 (January 1998)
<http://www.cdc.gov/niosh/animalrt.html>

NIOSH ALERT: Preventing Allergic Reactions to Natural Rubber Latex in the Workplace
DHHS (NIOSH) Publication No. 97-135 (June 1997)
<http://www.cdc.gov/niosh/topics/latex/>

Other Related Resources

National Association of State Public Health Veterinarians, Inc. (NASPHV) Compendium of Animal Rabies Prevention and Control
Provides comprehensive recommendations for rabies prevention and control.
http://www.avma.org/pubhlth/rabies_compendium_2005.pdf

AVMA Disaster Preparedness and Response Guide
Provides comprehensive disaster preparedness information regarding domestic animals.
http://www.avma.org/disaster/responseguide/responseguide_toc.asp

For more information, visit www.bt.cdc.gov/disasters/hurricanes,
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).

October 14, 2005

Page 5 of 5